

NORTH CAROLINA AGRICULTURAL RESEARCH SERVICE  
 NORTH CAROLINA STATE UNIVERSITY  
 RALEIGH, NORTH CAROLINA

NOTICE OF RELEASE OF NC 84173 TOMATO BREEDING LINE

The North Carolina Agricultural Research Service announces the release of a new fresh-market tomato breeding line, NC 84173.

NC 84173 is an inbred line in the F<sub>6</sub> generation. Its pedigree includes two previous releases from the North Carolina breeding program, 'Piedmont' and NC 50-7, and the cultivar Fla. MH1 and breeding line Fla. 7060 from the University of Florida (Fig. 1).

Plant type of NC 84173 is determinate (sp gene). When staked and pruned, plant height has averaged 80 cm. Foliage has moderate adaxial leaf curl in association with the gene n (nipped blossom), a characteristic derived from 'Florida MH1'. NC 84173 resembles Fla. 7060 in fruit type. Fruit are extremely large and vary in shape from round to elongate round. Fruit pedicels are jointed and are very long like those of Fla. 7060. The blossom scar of NC 84173 is generally pinpoint, because of the n gene, with very little prominent nipping of fruit observed. Fruit color of immature fruit is uniform green (u gene). Fruit color develops to a uniform, bright red. Interior color has been very good with no incidence of white tissue noted. Fruit are very firm in the ripe stage and soften slowly, maintaining good firmness for an extended period following ripening.

NC 84173 is resistance to races 1 and 2 (I and I-2 genes) of Fusarium oxysporum f. sp. lycopersici (Fusarium wilt) and to race 1 (Ve gene) of Verticillium dahliae (Verticillium wilt). NC 84173 has shown some susceptibility to zippering (adnate anther scars) and weather check (fine cuticle cracking on the shoulder area of the fruit), which appear to be associated with lines having deep round to elongate-round fruit shape. NC 84173 has good resistance to radial and concentric fruit cracking.

NC 84173 has produced high total fruit yields in replicated trials. U.S. Combination Grade yields of NC 84173 have been reduced in some trials by the occurrence of weather check and zippering.

NC 84173 is being released primarily as a parent line for use in production of the F<sub>1</sub> hybrid 'Mountain Spring', which is being released concurrently with NC 84173. Because of its very large fruit, its desirable combinations of other fruit characteristics and disease resistances, and its good combining ability in crosses, NC 84173 should prove useful to other breeders. Breeder seed will be maintained by the North Carolina Agricultural Research Service. Small samples for trial and breeding purposes are available from R. G. Gardner, Mountain Horticultural Crops Research and Extension Center, Fletcher, NC 28732-9216. Application is being made for a Plant Variety Protection Certificate.

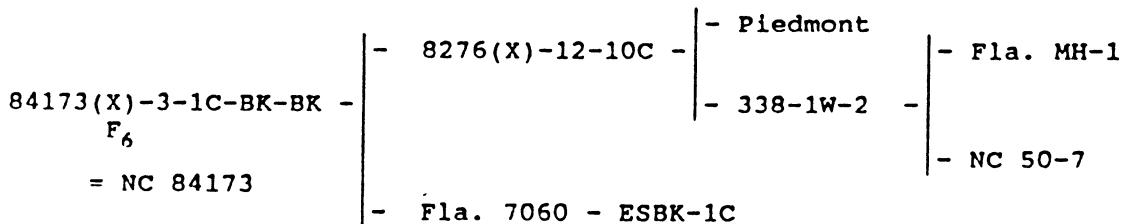
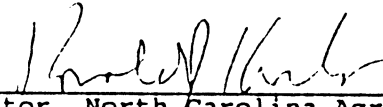


Fig. 1. Pedigree of NC 84173 tomato breeding line.

  
 \_\_\_\_\_  
 Director, North Carolina Agricultural  
 Research Service, Raleigh, NC

11/14/90  
 \_\_\_\_\_  
 Date